

P21059-P0

- 72 -

CLAIMS

5 *Sub A* 1. A radiant energy radiation apparatus, comprising means for radiating illumination light for an illumination purpose, the illumination light containing radiation in a visible wavelength range and radiation in a predetermined wavelength range which permeates into an organism to maintain/promote biofunctions.

10 2. A radiant energy radiation apparatus according to claim 1, wherein the predetermined wavelength range is a range of 600 nm to 1100 nm.

15 3. A radiant energy radiation apparatus according to claim 1, wherein the predetermined wavelength range maintains/promotes the biofunctions by increasing a strength of an immune system of the organism.

20 *Sub C2* 4. A radiant energy radiation apparatus according to claim 1, wherein radiation in the predetermined wavelength range maintains/promotes the biofunctions by activating an autonomic nervous system.

25 5. A radiant energy radiation apparatus according to any one of claims 1 to 4, wherein radiation means for radiation in a visible wavelength range and radiation means for radiation in the predetermined wavelength range are integrated together.

30 6. A radiant energy radiation apparatus according to any one of claims 1 to 4, wherein radiation means for radiation in a visible wavelength range and radiation means for radiation in the predetermined wavelength range are

P21059-P0

- 73 -

independently provided from each other.

7. A radiant energy radiation apparatus according to any one of claims 1 to 6, wherein on an irradiated plane to be irradiated with the illumination light, an irradiance at a wavelength in a range of 600 nm to 1100 nm is 0.1 W/m² or more.

8. A radiant energy radiation apparatus according to any one of claims 1 to 6, wherein: radiation in the predetermined wavelength range is radiation in a range of 600 nm to 1100 nm; and the radiation in the range of 600 nm to 1100 nm is radiated while being pulse-modulated at 0.5 to 13 Hz.

9. A radiant energy radiation apparatus according to any one of claims 1 to 6, wherein on an irradiated plane to be irradiated with the illumination light, radiant energy of radiation at a wavelength in a range of 600 nm to 1100 nm is equal to or greater than 15% of radiant energy of radiation at a wavelength in a visible wavelength range of 380 nm to 780 nm.

10. A radiant energy radiation apparatus according to any one of claims 1 to 6, wherein a radiant efficiency of radiation at a wavelength in a range of 600 nm to 1100 nm is equal to or greater than 0.001 W/lm.

11. A radiant energy radiation apparatus according to any one of claims 1 to 6, wherein on an irradiated plane to be irradiated with the illumination light, radiant energy of radiation at a wavelength in a range of 1100 nm to 2.5 μm is smaller than radiant energy of radiation at a wavelength in a range of 600 nm to 1100 nm.

P21059-PO

- 74 -

12. A radiant energy radiation apparatus according to any one of claims 1 to 6, wherein: the illumination light has a color of light which does not cause discomfort; and a deviation (duv) of the chromaticity of light from a Planckian locus in Commission Internationale de l'Eclairage (CIE) 1960 UCS chromaticity diagram is within ± 0.01 .

5

13. A radiant energy radiation apparatus according to any one of claims 9 to 12, wherein the apparatus has a configuration of a discharge lamp.

10

14. A radiant energy radiation apparatus according to claim 13, wherein the apparatus has a configuration of a fluorescent discharge lamp.

15

15. A radiant energy radiation apparatus according to any one of claims 9 to 12, wherein the apparatus has a configuration of an incandescent lamp.

20

16. A radiant energy radiation apparatus according to any one of claims 9 to 12, wherein the apparatus has a configuration of a light source including a solid light emitting device.

25

17. A radiant energy radiation apparatus, comprising means for radiating radiation in a predetermined wavelength range which has a low visibility for a human and which deeply permeates into an organism to maintain/promote biofunctions.

30

Sub C3

18. A radiant energy radiation apparatus according to claim 17, wherein the predetermined wavelength range is a

P21059-P0

- 75 -

range of 600 nm to 1100 nm.

5 19. A radiant energy radiation apparatus according to
claim 17, wherein radiation in the predetermined wavelength
range maintains/promotes the biofunctions by increasing a
strength of an immune system of the organism.

10 20. A radiant energy radiation apparatus according to
claim 17, wherein radiation in the predetermined wavelength
range maintains/promotes the biofunctions by activating an
autonomic nervous system.

15 21. A radiant energy radiation apparatus according to any
one of claims 17 to 20, wherein on an irradiated plane to
be irradiated with radiation, an irradiance at a wavelength
in a range of 700 nm to 1100 nm is 0.03 W/m^2 or more.

20 22. A radiant energy radiation apparatus according to any
one of claims 17 to 20, wherein: radiation in the
predetermined wavelength range is radiation in a range of
700 nm to 1100 nm; and radiation in the range of 700 nm to
1100 nm is radiated while being pulse-modulated at 0.5 to
13 Hz.

25 23. A radiant energy radiation apparatus according to any
one of claims 17 to 20, wherein on an irradiated plane to
be irradiated with radiation, radiant energy of radiation
at a wavelength in a range of 1100 nm to $2.5 \mu\text{m}$ is smaller
than radiant energy of radiation at a wavelength in a range
of 700 nm to 1100 nm.

30 24. A radiant energy radiation apparatus according to any
one of claims 21 to 23, wherein the apparatus has a.

P21059-PO

- 76 -

configuration of a discharge lamp.

25. A radiant energy radiation apparatus according claim 24, wherein the apparatus has a configuration of a fluorescent discharge lamp.

26. A radiant energy radiation apparatus according to any one of claims 21 to 23, wherein the apparatus has a configuration of an incandescent lamp.

10

27. A radiant energy radiation apparatus according to any one of claims 21 to 23, wherein the apparatus has a configuration of a light source including a solid light emitting device.

15

28. A radiant energy radiation apparatus according to any one of claims 17 to 27, wherein the apparatus has an illumination function of providing illumination light for an illumination purpose.

20

29. A radiant energy radiation apparatus according to any one of claims 17 to 27, wherein the apparatus has a display function of displaying a predetermined image.

25

30. A radiant energy radiation apparatus according to claim 29, wherein the predetermined image is displayed by the means for radiating radiation in the predetermined wavelength range.

30

31. A radiant energy radiation apparatus according to claim 29, further comprising display means for displaying the predetermined image, wherein the means for radiating radiation in the predetermined wavelength range is attached

P21059-P0

- 77 -

~~to the display means.~~